



Promulgation Details for 1 RCNY 3616-04

This rule became effective on December, 31, 2014.

Since such date, one or more amendments have been made to this rule. Each rule amendment has its own effective date and Statement of Basis and Purpose.

Below you will find one or more rule amendments (the most recent appearing at the top), followed by the original rule.

The effective date of each amendment and the original rule can be found at the top of each "NOTICE OF ADOPTION OF RULE."

**NOTICE OF ADOPTION OF RULE**

**NOTICE IS HEREBY GIVEN**, pursuant to the authority vested in the Commissioner of the Department of Buildings by Sections 643 and 1043 of the New York City Charter and Section 28-103.19 of the New York City Administrative Code, and in accordance with Section BC 3008 of the New York City Building Code, that the Department of Buildings hereby adopts the following rule repealing Sections 3616-01, 3616-02, 3616-03 and 3616-05 of Title 1 of the Official Compilation of the Rules of the City of New York and amending Section 3616-04 of such title.

This rule was first published on July 17, 2015 and a public hearing thereon was held on August 19, 2015.

Dated: 8.28.15  
New York, New York

  
Rick D. Chandler, P.E.  
Commissioner

## Statement of Basis and Purpose of Rule

The rule:

- repeals rules setting forth National Fire Protection Association (“NFPA”) amendments relating to elevator hoistways and machine rooms, closets and pantries, hydrostatic tests, and exemption from Fire Department connection requirements in one- and two-family residential buildings, and
- amends the rule setting forth the NFPA amendment relating to the national fire alarm and signaling code to add language relating to occupant evacuation elevators. This updates the safety requirements to the latest national standard, which will enhance public safety.

Sections one through four of the rule repeal sections 3616-01, 3616-02, 3616-03, and 3616-05 of Title 1 of the Rules of the City of New York (RCNY), because sections 3616-02 and 3616-05 have been superseded by Appendix Q of the Building Code, and the amendments to the NFPA standards that had been set forth in 3616-01 and 3616-03 have been superseded by the most recent associated NFPA standards, as amended by Appendix Q.

Section five of the proposed rule amends section 3616-04 of Title 1 of the RCNY to update provisions of section 21.6 of NFPA 72 regarding occupant evacuation elevators to conform to the requirements of NFPA 72-2013.

The Department of Buildings’ authority for this rule is found in sections 643 and 1043 of the New York City Charter, section 28-103.19 of the New York City Administrative Code, and section BC 3008 of the New York City Building Code (found in Chapter 7 of Title 28 of the New York City Administrative Code).

Note that an asterisk (\*) found within this rule, following the number or letter designating a paragraph, indicates that explanatory material on the paragraph can be found in Annex A of NFPA 72.

“Shall” and “must” denote mandatory requirements and may be used interchangeably in the rules of this department, unless otherwise specified or unless the context clearly indicates otherwise.

New material is underlined.

[Deleted material is in brackets.]

Section 1. Section 3616-01 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York, relating to fire protection standards for elevator hoistways and machine rooms, is REPEALED.

§ 2. Section 3616-02 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York, relating to fire protection standards for closets and pantries, is REPEALED.

§ 3. Section 3616-03 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York, relating to hydrostatic tests, is REPEALED.

§ 4. Section 3616-05 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York, relating to exemption from Fire Department connection requirements in one- and two-family residential buildings, is REPEALED.

§ 5. Section 3616-04 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York is amended to read as follows:

§ 3616-04 National Fire Protection Association ("NFPA") 72 Amendment Relating to the National Fire Alarm and Signaling Code.

Pursuant to Section 28-103.19 of the New York City Administrative Code, NFPA 72 (2010 edition) is hereby amended as follows:

\* \* \*

21.4.3 Delete and replace with the following: Pressure or water flow switches shall not be used to shut down elevator power.

21.6 Delete and replace with the following:

**21.6 Occupant Evacuation Elevators.**

**21.6.1 Elevator Status.** Any elevator specifically designated and marked for use by occupants for evacuation during fires shall comply with all of the provisions of Sections 21.5 and 21.6.

**21.6.2 Elevator Occupant Evacuation Operation (OEO).** Outputs from the fire alarm system to the elevator controller(s) shall be provided to implement elevator occupant evacuation operation in accordance with Section 2.27 of ASME A17.1/CSA B44 as modified by Chapter K1 of Appendix K of the New York City Building Code, as required in 21.6.2.1 and 21.6.2.2.

**21.6.2.1 Partial Evacuation.** Where an elevator or group of elevators is designated for use by occupants for evacuation, the provisions of 21.6.2.1.1 through 21.6.2.1.4 shall apply for partial evacuation.

**21.6.2.1.1 Initiation.** Output signal(s) shall be provided to initiate elevator occupant evacuation operation upon automatic or manual detection of a fire on a specific floor or floors as a result of either or both of the following:

(1) Activation of any automatic fire alarm initiating device in the building, other than an initiating device used for elevator Phase I Emergency Recall Operation in accordance with Chapter K1 of Appendix K of the New York City Building Code.

(2)\* Activation of manual means at the fire command center by authorized or emergency personnel.

**21.6.2.1.2\* Floor Identification.**

(A) The output signal(s) shall identify each floor to be evacuated.

(B) The identified floors shall be a contiguous block of floors including the following:

(1) The floor with the first activated automatic initiating device.

(2) Floors with any subsequently activated automatic initiating device(s).

(3) Floors identified by manual means from the fire command center.

(4) One floor above the highest floor identified by 21.6.2.1.2(B)(1) through 21.6.2.1.2(B)(3).

(5) One floor below the lowest floor identified by 21.6.2.1.2(B)(1) through 21.6.2.1.2(B)(3).

(C) The identified floors shall be displayed on a standard emergency services interface along with the other elevator status information required by 21.6.1.

**21.6.2.1.3 Manual Floor Selection.**

(A) A means shall be provided at the fire command center to allow the manual selection of floors.

(B) The floors shall be selected on the basis of information from authorized or emergency personnel.

**21.6.2.1.4\* Occupant Notification.** The in-building fire emergency voice/alarm communications system shall transmit coordinated messages throughout the building.

(A) Live voice evacuation messages shall be transmitted to the floors identified in 21.6.2.1.2 to indicate the need to evacuate and that elevator service is available.

(B) Live voice messages shall be transmitted to the floors not being evacuated to inform occupants of evacuation status and shall include an indication that elevator service is not available.

(C)\* Live voice messages shall be transmitted to the floors identified in 21.6.2.1.2 to indicate that elevator service is not available when all elevators have been recalled on Phase I Emergency Recall Operation.

(D) All live voice messages shall be coordinated with the text displays provided separately by the elevator management system.

**21.6.2.2 Total Evacuation.** Where an elevator or group of elevators is designated for use by occupants for evacuation, the provisions of 21.6.2.2.1 through 21.6.2.2.3 shall apply for total evacuation.

21.6.2.2.1 Output(s) to signal elevator occupant evacuation operation for total evacuation shall be manually activated from the fire command center by a means labeled “ELEVATOR TOTAL BUILDING EVACUATION.”

21.6.2.2.2 The output(s) shall identify that all floors are to be evacuated.

21.6.2.2.3 A live voice evacuation message shall be transmitted from the in-building fire emergency voice/alarm communication system throughout the entire building to indicate the need to evacuate.

**21.7.3\*** Delete and replace with the following: **Fan Shutdown and Restart.**

\* \* \*

This rule has an effective date of 12-31-14.

Statement of Substantial Need for Earlier Implementation

I hereby find, pursuant to §1043(f)(1)(c) of the New York City Charter, and hereby represent to the Mayor, that there is substantial need for the implementation of new Section 3616-04 of Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York ("RCNY"), regarding an amendment of National Fire Protection Association ("NFPA") 72 relating to the National Fire Alarm and Signaling Code, and the repeal of Section 907-01 of Chapter 9 of Title 1 of the RCNY, regarding fire protection systems, upon publication in the City Record of its Notice of Adoption.

NFPA 72 of 2010 covers the application, installation, location, performance, inspection, testing, and maintenance of fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment, and emergency communication systems.


1 RCNY 3616-04 provides modifications to NFPA 72 of 2010. Such modifications were made in recognition of New York City's unique, dense, urban construction environment, and are essential for fire safety purposes in the City.

The 2014 New York City Construction Codes, comprised of Local Laws 141 of 2013, 41 of 2012, and others, go into effect on October 1, 2014. Immediate effectiveness of this rule is necessary to ensure that on and after the same day that the 2014 Codes go into effect (October 1, 2014), all applications filed with the Department comply with this modified version of NFPA 72 of 2010 and not the unmodified version.



Rick D. Chandler, P.E.  
Commissioner  
Department of Buildings

APPROVED: \_\_\_\_\_



Bill de Blasio  
Mayor

DATE: \_\_\_\_\_

9/23/2014

**NOTICE OF ADOPTION OF RULE**

**NOTICE IS HEREBY GIVEN**, pursuant to the authority vested in the Commissioner of the Department of Buildings by Section 643 of the New York City Charter and in accordance with Section 1043 of the Charter, that the Department of Buildings hereby repeals Section 907-01 of Chapter 9 of Title 1 of the Official Compilation of the Rules of the City of New York (“RCNY”) and adopts the addition of Section 3616-04 to Chapter Subchapter Q of Chapter 3600 of Title 1 of the RCNY, regarding fire protection systems.

This rule was first published on July 28, 2014 and a public hearing thereon was held on August 27, 2014.

Dated: 9.3.14  
New York, New York

  
Rick D. Chandler, P.E.  
Commissioner



## **Statement of Basis and Purpose**

In accordance with Section 28-103.19 of the New York City Administrative Code, the Department of Buildings (“DOB”) is adding a new Section 3616-04 to Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York (“RCNY”), which adopts an amended version of National Fire Protection Association (“NFPA”) Standard 72, relating to the National Fire Alarm and Signaling Code. The DOB is also repealing Section 907-01 of Chapter 9 of Title 1 of the RCNY, regarding fire protection systems.

NFPA 72 of 2010 covers the application, installation, location, performance, inspection, testing, and maintenance of fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment, and emergency communication systems.

This rule requires compliance with proven safety practices based upon a nationally recognized standard, modified specifically for New York City. It improves fire safety in buildings that are required to comply with the proposed rule.

The adoption and modification of NFPA 72 renders the substance of existing rule 1 RCNY 907-01 redundant. Therefore, the DOB is repealing the rule in its entirety.

Note that an asterisk (\*) found within 1 RCNY 3616-04, following the number or letter designating a paragraph, indicates that explanatory material on the paragraph can be found in Annex A of NFPA 72.

New material is underlined.

[Deleted material is in brackets.]

Section 1. Section 907-01 of Chapter 9 of Title 1 of the Rules of the City of New York, relating to fire protection systems, is REPEALED.

§2. Subchapter Q of Chapter 3600 of Title 1 of the Rules of the City of New York is amended by adding a new Section 3616-04, to read as follows:

§3616-04 National Fire Protection Association (“NFPA”) 72 Amendment Relating to the National Fire Alarm and Signaling Code. Pursuant to Section 28-103.19 of the New York City Administrative Code, NFPA 72 (2010 edition) is hereby amended as follows:

**Chapter 1 - Administration** No changes.

**Chapter 2 - Referenced Publications**

2.1 Add at end the following: Where a referenced publication has been modified for the City of New York by the New York City Building Code or the rules of the Department of Buildings, every reference to such publication shall be deemed to include all such modifications.

2.2 Revise references to NFPA 13, 70 and 720, to read as follows:

NFPA 13, Standard for the Installation of Sprinkler Systems, as referenced in and modified by Appendix Q of the New York City Building Code.

NFPA 70, National Electrical Code, as referenced in and modified by the New York City Electrical Code.

NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, as referenced in and modified by 1 RCNY 908-01.

2.3.1 Revise references to ANSI/ASME A17.1a/CSA B44a, to read as follows:

ANSI/ASME A17.1a/CSA B44a, Safety Code for Elevators and Escalators, as referenced in and modified by Appendix K of the New York City Building Code.

2.4 Delete reference to NFPA 5000, and revise reference to NFPA 70, to read as follows:

NFPA 70, National Electrical Code, as referenced in and modified by the New York City Electrical Code.

Chapter 3 - Definitions No changes.

Chapter 4 - Reserved No changes.

Chapter 5 - Reserved No changes.

Chapter 6 - Reserved No changes.

Chapter 7 - Reserved No changes.

Chapter 8 - Reserved No changes.

Chapter 9 - Reserved No changes.

Chapter 10 - Fundamentals

10.4.1.1 Delete and replace with the following: Fire alarm system and emergency communication system plans and specifications shall be developed in accordance with the New York City Building Code by persons licensed and registered to practice the

profession of engineering under the Education Law of the State of New York, who are also experienced in the proper design, application, installation, and testing of the system.

**10.4.1.2 Delete.**

**10.4.2.1 Add at beginning the following: Fire alarm installations shall be performed by a New York City licensed electrical contractor.**

**10.4.3.1 Add at beginning the following: Fire alarm inspection, testing and maintenance shall be performed by a New York City licensed electrical contractor holding a New York State registration for “Business of Installing, Servicing or Maintaining Security or Fire Alarm Systems” or those fire alarm companies holding a New York State registration for “Business of Installing, Servicing or Maintaining Security or Fire Alarm Systems,” and in accordance with rules and regulations promulgated by the Fire Commissioner.**

**10.5.3.1 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.3.2 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.3.3 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.3.4 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.4.1 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.4.2 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

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**10.5.5.2 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

**10.5.5.3 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.**

10.5.5.4 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.

10.5.6.1 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.

10.5.6.2 Delete and replace with the following: Refer to the New York City Electrical Code for requirements.

10.5.6.3.1 Delete and replace with the following: The secondary power supply for fire alarm systems and supervising station facilities shall have sufficient capacity to operate the system in accordance with the New York City Electrical Code. The secondary power supply for other systems shall have sufficient capacity to operate the system under quiescent load (system operating in a nonalarm condition) for a minimum of 24 hours and, at the end of that period, shall be capable of operating all alarm notification appliances used for evacuation or to direct aid to the location of an emergency for 5 minutes, unless otherwise permitted or required by the following:

- (1) Reserved.
- (2) Reserved.
- (3) Reserved.
- (4) The secondary power supply for high-power speaker arrays used for wide-area mass notification systems shall be in accordance with 24.4.3.4.2.2.
- (5) The secondary power supply for textual visible appliances shall be in accordance with 24.4.3.4.7.1.
- (6) The secondary power supply capacity for central control stations of a wide-area mass notification systems shall be capable of supporting operations for a minimum of 24 hours.
- (7) The secondary power supply for in-building mass notification systems shall be capable of operating the system under quiescent load for a minimum of 24 hours and then shall be capable of operating the system during emergency condition for a period of 15 minutes at maximum connected load.

Chapters 11 - Reserved No changes.

Chapter 12 - Circuits and Pathways No changes.

Chapter 13 - Reserved No changes.

Chapter 14 - Inspection, Testing and Maintenance

14.1.1 Delete and replace with the following: The inspection, testing and maintenance of systems, their initiating devices, and notification appliances shall comply with the requirements of this chapter and the New York City Fire Code.

14.1.2 Delete and replace with the following: The inspection, testing and maintenance of single- and multiple-station smoke and heat alarms and household fire alarm systems shall comply with the requirements of this chapter and the New York City Fire Code.

14.6.3 Delete and replace with the following: **Supervising Station Records.** For supervising station alarm systems, records pertaining to signals received at the supervising station that result from maintenance, inspection, and testing shall be maintained in accordance with the New York City Fire Code.

14.6.3.1 Delete.

14.6.3.2 Delete.

14.6.4 Delete.

Chapters 15 - Reserved No changes.

Chapters 16 - Reserved No changes.

Chapter 17 - Initiating Devices No changes.

Chapter 18 - Notification Appliances No changes.

Chapters 19 - Reserved No changes.

Chapters 20 - Reserved No changes.

Chapter 21 - Emergency Control Functions and Interfaces

21.3.3 Delete and replace with the following: Unless otherwise required by the authority having jurisdiction, only the elevator lobby, elevator hoistway, and elevator machine room smoke detectors, sprinkler waterflow alarm-initiating devices, or other automatic fire detection as permitted by 21.3.7, and initiating devices used to initiate shutdown of elevator power in accordance with 21.4 shall be used to recall elevators for fire fighters' service.

21.3.12 Delete and replace with the following: Separate outputs from the fire alarm systems to the elevator controller(s) shall be provided to implement elevator Phase 1 Emergency Recall Operation in accordance with ANSI/ASME A17.1a/CSA B44a, Safety Code for Elevators and Escalators.

21.3.12.1 Delete and replace with the following: See ANSI/ASME A17.1a/CSA B44a, Safety Code for Elevators and Escalators, for designated and alternate levels of elevator recall.

21.3.12.2 Delete and replace with the following: See ANSI/ASME A17.1a/CSA B44a, Safety Code for Elevators and Escalators, for designated and alternate levels of elevator recall.

21.3.12.3 Delete and replace with the following: See ANSI/ASME A17.1a/CSA B44a, Safety Code for Elevators and Escalators, for designated and alternate levels of elevator recall.

21.4.2 Delete and replace with the following: If heat detectors are used to shut down elevator power prior to sprinkler operation, they shall be placed within 24 in. (610 mm) of each sprinkler head and be installed in accordance with the requirements of Chapter 17. Upon activation of the heat detector used for elevator power shutdown, there shall be permitted to be a delay in the activation of the power shunt trip. This delay should be the time that it takes the elevator cab to travel from the top of the hoist way to the lowest recall level. Alternatively, engineering methods, such as those specified in Annex B, shall be permitted to be used to select and place heat detectors to ensure response prior to any sprinkler head operation under a variety of the growth rate scenarios.

21.4.3 Delete and replace with the following: Pressure or water flow switches shall not be used to shut down elevator power.

21.7.3\* Delete and replace with the following: **Fan Shutdown and Restart.**

Add 21.7.3.1 Connections between fire alarm systems and the HVAC systems for the purpose of monitoring and control shall be arranged such that primary control (the control that all other controls are secondary or subservient to) capability rests with the fire alarm control unit(s) under all circumstances and in addition shall operate and be monitored in accordance with the New York City Building Code.

Exception - Primary control of HVAC systems may rest with approved smoke control systems.

Add 21.7.3.2 HVAC fans or fan systems which have been automatically shut down by the activation of any fire alarm control unit or device shall be arranged and equipped not to automatically restart when the fire alarm control unit or device is reset. At least two manual means of restarting the fans or fan systems shall be required, such as manually resetting the fire alarm control unit or device and subsequently manually resetting the fan or fan system controls.

Add 21.7.3.3 Fans or fan systems that were automatically shut down by the fire alarm control unit or device in high rise fire alarm systems shall be manually enabled to start by means of overriding the fan shut down through the use of city wide standard key (#2642) located at the Fire Command Center and/or Fire Fighters' Smoke Control Station. The actual start of the fans shall be accomplished manually through HVAC controls at the Fire Command Center, Fire Fighters' Smoke Control Station and locally at the fan rooms.

Add **21.7.3.4** Smoke Exhaust control means shall be enabled through the use of city wide standard key (#2642) located at the Fire Command Center, Fire Fighters' Smoke Control Station, fire alarm control unit or, in the entrance lobby of the building adjacent to the fire alarm remote annunciator, when provided.

**21.9.1** Delete and replace with the following: Where permitted by the New York City Building Code, any device or system intended to electrically lock a required means of egress door in the direction of egress shall be connected to the fire alarm system serving the protected premises.

**21.9.3** Delete and replace with the following: Where permission is obtained from the Commissioner, for all means of egress doors connected in accordance with 21.9.1, and where batteries are used in accordance with 10.5.6.1.1(1) as the secondary power supply, the batteries shall not be utilized to maintain these doors in the locked condition, unless the fire alarm control unit is arranged with circuitry and sufficient secondary power to ensure the exits will unlock within 10 minutes of loss of primary power.

**Chapter 22 - Reserved** No changes.

### **Chapter 23 - Protected Premises Fire Alarm Systems**

**23.3.2** Delete and replace with the following: **Nonrequired Systems.** The features for a nonrequired system shall be established by the system designer on the basis of the goals and objectives intended by the system owner and subject to approval of the Building Department and Fire Department.

**23.8.1.2.2(3)** Delete and replace with the following: (3) Subsequent system operation shall be subject to approval of the Fire Department.

Add Section **23.8.1.2.3** Group A Occupancies. Presignal systems in Group A Occupancies required by Section 907.2.1.1 of the New York City Building Code shall operate in the "Event / Non-Event Mode," as follows:

- (1) For the purposes of this section, Event Mode is defined as an assembly space occupied by public members. The Event Mode and Non-Event Mode shall be selectable positions in a two position key switch operated by city wide standard key (#2642) with visual indication of mode status at the fire alarm control panel. A log record shall be maintained for all mode operations identifying the operator, time and date of each such operation of mode and the selected duration of time for Event Mode.
- (2) In the Event Mode no automatic alarm audible or visual notification signals shall be transmitted to the public or occupants of the place of assembly and support areas – manual live voice announcements shall be made by the designated Fire Guard(s) supervising the fire alarm panel during all publicly attended place of assembly for direction and implementation of emergency procedures including evacuation.

- (3) The Event Mode shall be adjustable up to a maximum time period duration of twelve hours, and shall automatically revert to Non-Event Mode at the expiration of the time period unless manually switched to Non-Event Mode prior to such expiration time. A supervisory signal in addition to the foregoing is not prohibited.
- (4) In the Non-Event Mode all speakers, horns and visual appliances shall emit alarm notification signals for public notification purposes – the audible signal shall be a temporal code three signal pattern.
- (5) In the Event Mode an unacknowledged alarm actuation shall, after the expiration of 180 seconds (3 minutes), automatically revert to Non-Event Mode and cause all alarm appliances to emit notification signals throughout the entire premises without exception, including publicly occupied assembly and support areas. Prerecorded or synthesized voice messages are prohibited.
- (6) The fire alarm system shall be accessible within or adjacent to the assembly space to permit the assigned Fire Guard(s) to assess conditions and effectively direct evacuation of the admitted public.
- (7) The Fire Alarm Panel with voice communication shall be manned by a Fire Guard(s), with a Certificate of Fitness issued by the Fire Department, during all times that the fire alarm system is in Event Mode.
- (8) A central station connection for manual, automatic and waterflow valve alarm and trouble shall be provided for the fire alarm system, activated automatically in either Event or Non-event Mode.

#### **23.8.5.1.2 Delete Exception.**

**23.10.1** Delete and replace with the following: The requirements of Section 23.10 shall apply to both audible (tone and prerecorded voice) and visible notification appliance circuits when permitted with the approval of the New York City Department of Buildings in concurrence with the Fire Department.

### **Chapter 24 – Emergency Communications Systems (ECS)**

**24.3.5.4.1** Add the following exception: Exception - Pathway survivability Level 1 is permitted when pathway is designated as Class A or Class X with redundant pathways separated by a minimum of 15 feet.

#### **Add 24.4.1.10 One-Way Emergency Voice Communications System.**

**Add 24.4.1.10.1 Scope.** One-way emergency voice communications equipment shall be installed in accordance with section 24.4.1.10.

**Add 24.4.1.10.2 Fire Department Use.** One-way emergency voice communications service, where provided, shall be for use only by the Fire Department or by building personnel authorized to use such service who have obtained a Certificate of Fitness from the Fire Department.



Add **24.4.1.10.2.1 Activation.** The voice communication panel at the annunciator panel shall be operated only by the Fire Department with activation of city wide standard key (#2642).

Add **24.4.1.10.2.2 Building Personnel Use.** If requested by a building owner, building personnel who have obtained a FDNY Certificate of Fitness shall be permitted to utilize the system from a panel at the concierge or security desk.

Add **24.4.1.10.2.3 Permitted Variation.** Any variation of equipment and system operation, if permitted by the Fire Commissioner, provided in order to facilitate additional uses of any one-way emergency voice communications service shall not adversely affect performance when used by those authorized pursuant to section 24.4.1.10.2 of this chapter.

Add **24.4.1.10.2.4 Speaker Stations.** Speaker stations shall be installed in each dwelling unit and on at least every other story in every required vertical exit enclosure.

Add **24.4.1.10.2.5 System Zones.** One-way emergency voice communication systems shall, at a minimum, have the capability for an all-call function to all speaker stations, and shall have the capability of permitting simultaneous operation of any and all of the following selectable zones:

- (1) All speaker stations within the dwelling units on any given floor; and
- (2) All speaker stations within a given required vertical exit enclosure.

Add **24.4.1.10.2.6 Dwelling Unit Intercoms.** One-way emergency voice communication systems may share wiring, speaker stations and other components with an intercommunication system required by section 1008.4.4 of the New York City Building Code provided the entire system otherwise complies with the provisions of this chapter.

**24.5.1.11** Delete and replace with the following: In buildings provided with a two-way telephone communications system, at least one telephone station shall be provided where required by the New York City Building Code.

**24.5.1.15** Delete and replace with the following: Telephone jacks are prohibited in new buildings and new fire alarm systems in existing buildings.

**24.5.2\* Two-way Radio Communications Enhancement Systems (In-Building Auxiliary Radio Communication System (ARCS)).**

Add **24.5.2.1.3 Definitions.** The following definitions are applicable to this section only.

**Delivered Audio Quality (DAQ).** A measure of audio quality over a transmission medium as defined in standards published in TIA/TSB-88C. The following table shows the DAQ descriptions as published in the document:

<u>Delivered Audio Quality (DAQ)</u>	<u>Faded Subjective Performance Description</u>
<u>1</u>	<u>Unusable, speech present but unreadable.</u>
<u>2</u>	<u>Understandable with considerable effort. Frequent repetition due to noise / distortion.</u>
<u>3</u>	<u>Speech understandable with slight effort. Occasional repetition required due to noise / distortion.</u>
<u>3.4</u>	<u>Speech understandable with repetition only rarely required. Some noise / distortion.</u>
<u>4</u>	<u>Speech easily understood. Occasional noise / distortion.</u>
<u>4.5</u>	<u>Speech easily understood. Infrequent noise / distortion.</u>
<u>5</u>	<u>Speech easily understood.</u>

**Dedicated Radio Console (DRC).** A fixed location console that contains at least the following components:

- (1) A handset or headset to broadcast and/or receive voice communications from/to ARCS.
- (2) A visual display to identify all signals transmitted from the Firefighter handheld units and supervisory signals.
- (3) Fire Department city wide standard key (#2642) to enable/disable radio transmission.

**In-Building Auxiliary Radio Communication System (ARCS).** Wireless two-way radio communication enhancement system installed in buildings to propagate Fire Department wireless frequencies for the use of the Fire Department in case of an emergency.

**Repeater Channel System.** A repeater system utilizing channels with paired receive and transmit frequencies. When a user within the building transmits on a repeater channel, the repeater system rebroadcasts the users' signal to the DRC and all users within the building on that channel. This transmission increases the distance from which users can directly talk with each other. A user at the DRC must enable repeater channel for users to communicate.

**Simplex Channel System.** A simplex system utilizing channels with the same frequencies for transmit and receive. Users communicate on simplex channels radio-to-radio without going through infrastructure. However, their radios need to be within a certain distance to be picked up by one another. A simplex system allows a user at the DRC to communicate with a user on a simplex channel anywhere in the building, even though the distance between the DRC and the user would typically be prohibitive. A simplex system only extends the transmission's reach for the DRC. It does not improve coverage between individual user radios.

24.5.2.2.1 Delete and replace with the following: **Critical Areas.** Critical areas, such as the fire/emergency command center(s), the fire pump room(s), exit stairs, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas deemed critical by the authority having jurisdiction at the time of plan examination, shall be provided with 100 percent floor area radio coverage.

24.5.2.2.2 Delete and replace with the following: **General Building Areas.** General building areas shall be provided with 95 percent floor area radio coverage in accordance with rules promulgated by the Fire Department.

24.5.2.2.3 Delete and replace with the following: **System Types.** Buildings and structures that cannot support the required level of radio coverage shall be equipped with either a repeater channel system or a simplex channel system.

24.5.2.3.1 Delete and replace with the following: **Inbound.** A minimum inbound signal strength of -95 dBm, or other signal strength as required by the authority having jurisdiction, shall be provided throughout the coverage area and provide a minimum intelligible DAQ of 3.4.

24.5.2.3.2 Delete and replace with the following: **Outbound.** A minimum outbound signal strength of -95 dBm at the donor site, or other signal strength as required by the authority having jurisdiction, shall be provided from the coverage area and provide a minimum intelligible DAQ of 3.4.

24.5.2.4\* Delete and replace with the following: **System Radio Frequencies.** The ARCS shall be capable of transmitting all public safety radio frequencies assigned by the Fire Department and be capable of using any modulation technology.

24.5.2.4.1 Delete and replace with the following: **List of Assigned Frequencies.** The Fire Department shall maintain a list of all inbound/outbound frequency pairs for distribution to system designers and installers.

24.5.2.4.2\* Delete and replace with the following: **Frequency Changes.** Systems shall be capable of upgrade, to allow for instances where the Fire Department changes or adds system frequencies, in order to maintain radio system coverage as originally designed.

Add 24.5.2.4.3 **Perimeter Coverage.** The design of the ARCS shall minimize RF radiation beyond the intended building's limits so as to avoid interference, in compliance with FCC regulations.

24.5.2.5.1 Delete and replace with the following: **Component Approval.** Components utilized in the installation of the public safety radio enhancement system, such as repeaters, transmitters, receivers, signal boosters, cabling, and fiber-distributed antenna systems, shall be FCC compliant, listed by a Nationally Recognized Testing Laboratory (NRTL) and shall be compatible with the Fire Department radio system.

24.5.2.5.2 Delete and replace with the following: **Component Enclosures.** All active components including but not limited to repeater, transmitter, receiver, and signal booster components remotely located from the Fire Command Center shall be contained in a NEMA 4- or 4X- type enclosure(s).

Add 24.5.2.5.2.1 The enclosure shall be painted Fire Department Red.

Add 24.5.2.5.2.2 The enclosure shall have a locking mechanism that utilizes Fire Department city wide standard key (#2642).

Add 24.5.2.5.2.3 A tamper switch shall monitor all active components in non-secure locations located remotely from the Fire Command Center such as amplifiers and repeaters. The notification for the tamper switch shall be monitored at the DRC.

24.5.2.5.3 Delete and replace with the following: **Power Supply.** Power supply to the ARCS shall be in accordance with section 760.41 of the New York City Electrical Code.

Exception - Where power supply for the building fire alarm system has adequate capacity to support the ARCS power requirements, connection to the fire alarm system power supply via dedicated branch circuits with appropriate overcurrent protection is permitted.

Add 24.5.2.5.4.1 **External filters.** Permanent external filters and attachments shall not be permitted.

Add 24.5.2.5.5 **Labeling.**

Add 24.5.2.5.5.1 **Cables.**

Add 24.5.2.5.5.1.1 Cables utilized in the ARCS shall be labeled as “FDNY Communications Use”.

Add 24.5.2.5.5.1.2 Where continuously accessible, the cable shall be marked every 8 feet.

Add 24.5.2.5.5.1.3 Wherever the cable is intermittently accessible, each accessible point shall be labeled.

Add 24.5.2.5.5.1.4 Field labeling of the cables shall be acceptable.

Add 24.5.2.5.5.2 **Dedicated Radio Console Enclosure.** The DRC shall be enclosed and the outside of the enclosure shall be labeled the following in white lettering contrasted against a Fire Department Red background:

AUXILIARY RADIO COMMUNICATIONS

Add 24.5.2.5.5.3 Cable Rating. All ARCS cables shall be protected such that the circuit shall maintain its electrical function during fire conditions for at least a 2-hour period and the protection shall not interfere with the normal operation of the system as a whole.

Exception - Radiating ARCS cables running horizontally that are not part of the main trunk connecting to a vertical riser shall have a plenum rating with a minimum temperature of 125°C.

24.5.2.6.1 Delete and replace with the following: Supervisory signals shall be provided in the form of visual indications (e.g., LED, alpha-numeric display) at the DRC with at minimum for the following system functions:

- (1) The integrity of the circuit monitoring signal booster(s) and power supply(ies) shall comply with 10.17.1.
- (2) Base Station Failure.
  - (a) Low transmit power
  - (b) Over temperature
  - (c) High Voltage Standing Wave Ratios (VSWR)
- (3) Supervisory Signals.
  - (a) Loss of alternating-current power source
  - (b) Overall base-station failure
  - (c) Low battery capacity, alarming at 70 percent of battery capacity
  - (d) Antenna malfunction, where applicable
  - (e) Signal amplification failure, where applicable
  - (f) Tamper switch as required

24.5.2.7 Delete and replace with the following: **Technical Criteria.** The Fire Department shall maintain a document of technical information specific to its requirements. This document shall contain, at a minimum, the following:

- (1) Frequencies required
- (2) Maximum time domain interference
- (3) Unit ID and emergency alert signaling
- (4) DRC specifications
- (5) Installation specifications
- (6) Test equipment specifications
- (7) Other supporting technical information necessary to direct system design

24.5.2.8 Delete and replace with the following: **Inspection and Testing.** Inspection and testing shall be performed in accordance with testing frequencies and methods set forth in the rules of the Fire Department.

**Chapters 25 - Reserved** No changes.

**Chapter 26 - Supervising Station Alarm Systems**

26.3.8.2 Delete and replace with the following: Testing and maintenance records shall be retained as required by the New York City Fire Code.

26.3.9 Delete and replace with the following: Testing and maintenance for central station service shall be performed in accordance with the New York City Fire Code.

26.4.1 Delete and replace with the following: **Application.** Where permitted by the Fire Department, supervising facilities of proprietary alarm systems shall comply with the operating procedures of Section 26.4. The facilities, equipment, personnel, operation, testing, and maintenance of the proprietary supervising station shall also comply with 26.4.

26.6.5 Delete and replace with the following: Testing and maintenance of communications methods shall be in accordance with the requirements of the New York City Fire Code.

**Chapters 27 - Public Emergency Alarm Reporting Systems** No changes.

**Chapters 28 - Reserved** No changes.

**Chapters 29 - Single- and Multiple-Station Alarms and Household Fire Alarm Systems**

29.1.4 Delete and replace with the following: The requirements of this chapter shall not apply to one- and two-family manufactured homes.

29.5 Delete, including subsections, and replace with the following: Smoke alarm detection and notification requirements shall be in accordance with Section 907 of the New York City Building Code.

29.6.3(2) Delete and replace with the following: (2) All electrical systems shall be installed by a New York City licensed electrical contractor.

§3. This rule shall take effect on October 1, 2014, except that if the effective date of Local Law number 141 for the year 2013 is extended to December 31, 2014, this rule shall take effect on December 31, 2014.